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Editorial.

THE ARMY VETERINARY OFFICER AND THE HORSES IN WAR TIME.

At the present moment, when everyone is talking of the war, we in our profession can legitimately point with pride to the manner in which our members have unselfishly and ungrudgingly responded to the call of duty. In the Regulars the value of the Army Veterinary Corps is well established, but this is the first real call which has been made upon the Territorial Veterinary Officer, and already his value and the value of the Departmental system arrangement has been made clearly apparent.

Our men have, one and all, responded to the call of duty, leaving lucrative positions or busy practices, often without having been able to find a *locum tenens;* and in no branch of the Department has there been a lack of volunteers. The mere civilian, too, without even the dignity of Army rank or the glory of a uniform, has proved his usefulness; and whether as examiner of Remount purchases, as Civilian Veterinary Surgeon attached to a regiment or to a veterinary hospital, or in charge of horses on a transport ship, his advice and skilled knowledge has saved the country hundreds of thousands of pounds.

To anyone who has watched the evolution of the Army Veterinary Corps and the development from the days of George Fleming under the Regimental system to the present Departmental and Hospital scheme, the progress made seems marvellous, and it is no exaggeration to say that the methods adopted by the British Army for the care and treatment of its sick and wounded horses can compare favourably with any country in the world. The Field Hospital system, supported by hospitals on the lines of communi-

cation and at the base, gives results in relieving the sufferings of the horses, which are as good as can possibly be obtained, and for those in agony or disabled past repair the veterinary officer and his staff of trained assistants have means at hand for a speedy and painless end.

It is hard for a mere layman to understand why those who are engaged in the work of mercy should not be placed under the protection of the Red Cross, and we feel that the efforts which have from time to time been made in this direction must eventually be crowned with success.

That the veterinary service is considered efficient is still further proved by the fact that the military authorities have firmly decided that on no account will they permit any private volunteer body of persons to enter the sphere of hostilities for the purpose of destroying wounded horses. That they are wise in this is beyond question, and their decision is a source of satisfaction to the profession in general, and a great compliment to our military colleagues, and the organization they have worked so hard to place in its present state of efficiency.

THE HORSE SUPPLY IN WAR EMERGENCY.

THE rapidity with which the horse supply has been furnished for the present war has been a great compliment to the system at present on its first great trial.

Not only were the necessary horses furnished within a few days, *but the animals obtained were fit and ready to take the field at once.*

Ever since the lesson of the South African War the Government have worked out a scheme whereby every owner of horses was registered, and to those who voluntarily agreed a certain sum (equal to the average value of the horse in the stud) was agreed upon as a purchase price in the event of an emergency occurring. The owner then registered whatever proportion of his stud he thought he could spare, receiving in return in peace time a Government grant of a certain sum per horse per year. In time of war (or at the present moment) the owner is called upon to furnish, at a few hours' notice, all the horses he has promised to supply.

These are selected by a Remount Purchasing Officer accompanied by a Veterinary Officer, who examines and proves them, and the matter ends for the moment.

In the event of more being wanted the two officers return to the

owner, accompanied by a policeman, and present a "Requisition" warrant, compelling him to produce and sell a further number of his stud, the price for these being agreed upon between the Purchasing Officer and the seller.

In the present instance the Regular Army had its ranks filled up within a week, and the Territorials were all supplied about ten days later. The advantages of such a system has been well illustrated during the present mobilization.

Instead of a lot of unruly young, unfit horses, who do not take kindly to their work, the Government obtains without trouble and at a reasonable price a large number of adult well-seasoned horses, all *at once* able to carry a man or go straight into harness.

The scheme has been well thought out, the mobilization of the horses and transport passed off without a hitch, and to those who were the originators of the scheme we of the profession, whose work brings us in daily contact with horses and their owners, cannot but wish to add our meed of praise.

THE DISAPPOINTMENT OF THE INTERNATIONAL CONGRESS.

GREAT and bitter has been the disappointment of the members of the International Veterinary Congress which, through circumstances over which we had no control, has been a total failure. Had the German Kaiser waited only a month or two longer before letting loose the dogs of war how different it would all have been! We in Great Britain are able to say that no stone had been left unturned to give our Continental colleagues a hearty English welcome, and they on their part were looking forward to a record Congress in this, the jubilee year.

Every civilized country of the world had delegated its representative and the August number of THE VETERINARY JOURNAL gives a fair idea of the cosmopolitan nature of the gathering; but when the Germans and Austrians came not, and our near neighbours the French too stayed away, it was known that something serious was in the air.

Some of our Dutch *confrères* arrived on Saturday and returned on Sunday. The Norwegians, Swedes and Danes returned on Monday, the officers of the British Army (both Regulars and Territorials) were told to hold themselves in readiness on Tuesday, and

on Wednesday Sir John M'Fadyean, the President, who had (with his committee) worked so hard for the success of the whole affair, decided to bring the Congress to a conclusion. Were it not for the great expense of the whole thing, which would have to be repeated, we Britishers would even yet like the opportunity to show hospitality to our colleagues from abroad, and to have it held here again when peace becomes established.

Perhaps this idea may yet be considered, and, if so, perhaps several other countries may unite with us in bearing the financial burden; for though the nations are at war, true science knows no international differences, and when on veterinary matters for the benefit of animal life there is only one common thought at the bottom of it all, and that is how to successfully combat disease.

Disease is the universal and common enemy and against this we are united; it is only in our methods of attack whereby we differ, and the fiercest controversialists in the lecture room will afterwards set all their differences on one side and be the best of social friends. It is in this manner that congresses promote friendships, and we in England should much like the thought to be with us that many friendships had been made or renewed on British soil. However, we shall see what we shall see!

Personal.

AUSTRALASIAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, 1912.

EXTRACTS FROM PRESIDENTIAL ADDRESS BY PROFESSOR T. W. EDGEWORTH DAVID, C.M.G., B.A., F.R.S., Hon. D.Sc.Oxon.

". . . THE action of the Federal Government in organizing the recent scientific expedition to Northern Territory, in which Professors Gilruth and Spencer, Professor Woolnough, and Dr. Breinl took part, will doubtless highly commend itself to the general public, no less than to workers in science. The reports already furnished all show that the Northern Territory has far greater possibilities than probably most of us ever imagined in regard to both its pastoral and mining future. . ."

"Those who have the privilege of knowing Professor Gilruth intimately will have every confidence that he will prove himself—indeed, he has already proved himself—an able and successful administrator, and this Association is surely grateful to the Federal Government for having placed our colleague in so high and responsible a position."

General Articles.

ABNORMALITIES OF THE SEXUAL GLANDS OF MAN AND HORSES.*

By SIR JOHN BLAND SUTTON, F.R.C.S.

Surgeon to the Middlesex Hospital.

FEW things in the operating theatre arrest the attention of the medical student more forcibly than seeing, for the first time, a dermoid of the ovary or of the testicle. The mode of origin of these extraordinary tumours has never been clearly explained, but our knowledge in regard to their occurrence in men and women, horses and mares has been advanced by the enterprise of surgeons and veterinarians. Formerly our knowledge of dermoids of the genital glands was obtained from observations in the *post-mortem* room, and the descriptions were brief and insufficient. The establishment of ovariotomy proved the frequency and importance of ovarian dermoids; some of the largest tumours found in women are dermoids. Careful examination of early examples, removed during life, have shown that they arise in the oöphoron or egg-bearing segment of the ovary. Gradually it was recognized that the essential part of an ovarian dermoid is the small organized body known as the embryonal rudiment. The grease, hair, epidermic cells, and teeth which fill the cyst are waste products shed by the skin covering the embryonal rudiment. This curious body of varying complexity is now regarded as an imperfectly developed ovum, thus harking back to the opinion held by our predecessors that the ovarian dermoid is due to parthenogenesis. The remarkable experiments of Bataillon on the eggs of the grass frog help to support this view. Bataillon found that by puncturing virgin eggs with very minute metal stylets carefully sterilized, segmentation could be initiated. He succeeded, after puncturing 10,000 eggs, in producing three tadpoles. Eggs punctured by his stylets always segmented, but the development became arrested just short of the tadpole stage.

It is reasonable to believe that the ovarian dermoid or embryoma, is an ovum that has been started into activity by some

* This article was written specially as a chapter for the Second Edition of "Castration (including Cryptorchids and Caponing) and Ovariotomy." Published by W. and A. K. Johnston, Edinburgh.

pathological cause, but not by a speramotozoon. Ovarian dermoids in mares are rare. I have only had an opportunity of examining one specimen. The hair in it was like that on the mane or tail. In women the hair in ovarian dermoids is like that on the head or on the pubes, but it rarely agrees in colour with that of its host.

There is a rare, but extremely malignant form of ovarian embryoma, distinguished as malignant teratoma of the ovary. Such a tumour is solid and consists of a conglomerate of fœtal tissues, skin with developing hair, sweat and sebaceous glands; developing teeth, brain matter, neuro-epithelium, and cells, resembling choroidal pigmented tissue. These tumours arise mainly in girls and young women and give rise to secondary deposits in the peritoneum. They quickly destroy life. If removed they recur rapidly. Examples of malignant teratomas have not been recorded in mares. Cystic tumours of the ovary are common and, as in women, benign.

Testicular Dermoids.

Dermoids of the testicle are rare in man, especially if this term be restricted to tumours containing hair or teeth. It was formerly customary in text-books of surgery to state that dermoids of the testicle are common. British surgical and pathological literature of the last thirty years contains reports of six cases of testicular dermoids, and of these two came from China and one from India. There is a tendency to widen the definition of the term dermoid or embryoma of the testicle so as to include some growths of the testis commonly called "general cystic disease," and this is probably correct. Mr. Hobday has afforded me opportunities of examining several excellent and fresh specimens of testicular dermoids removed from horses. This shows that such tumours are fairly frequent in horses, and it is remarkable that all occurred in undescended testicles.

Testicular dermoids in man and horses are always unilateral; ovarian dermoids are often bilateral. Like the typical ovarian dermoids, such a tumour connected with the testis of a horse consists of a solid portion, the embryonal rudiment lodged in a cyst packed with grease, epithelium and shed hair. The hair and the teeth are equine in character. The relation of the dermoid to the testicle is peculiar; it does not grow in the secreting tissue of the testis but arises in the body known as the paradidymis,

between the true testis and the epididymis. The paradidymis is composed of vestiges of the gonad, the embryonic organ or *anlage*, from which ovary and testis are derived.

I have long suspected that the source of testicular dermoid is unsuppressed ovarian tissue in the paradidymis. This opinion is supported by the observations of Pick and others that the sexual glands of human pseudo-hermaphrodites are liable to become the seat of embryomas.

Testicular dermoids of horses are interesting in another aspect. The majority arise in undescended, or imperfectly descended testes; a dermoid in an undescended testis in man is extremely rare. I only know one recorded instance. The abdominal testis in man is liable to tumours, but they are invariably sarcomatous.

There is a remarkable difference in the undescended testes of horses and men. There is evidence that in horses testes retained in the abdomen, or in the inguinal canal, contain spermatozoa. In man this is rarely the case; in him retention of the testis is often associated with inguinal hernia; it is a matter of safety and increases the chance of success if an imperfectly descended testicle is removed in the course of an operation for the cure of an inguinal hernia. There should be no hesitation in removing such an organ; after careful observations extending over many years I only once found spermatozoa in an undescended testis. It is commonly believed that the imperfection of an undescended testicle is due to its failure to reach the scrotum. This I believe to be an error. *An undescended testis fails to reach the scrotum because of its imperfection.*

The Effects of Castration and Spaying.

It is the experience of stockyards that the removal of the sexual glands in young animals is followed by an increased formation of fat and bone. This corresponds with the observations that adult eunuchs are usually gross and fat. Physiologists and anatomists have been puzzled by the discovery that the hypophysis (pituitary body) influences the growth of the body and the development of the sexual characters in a remarkable manner. Inefficient function of the hypophysis in men and women leads to excessive deposition of fat, loss of sexual power,

and the genital organs revert to an infantile type. The term "pituitary eunuchism" has been suggested by Shattock for sexual inability in men due to this cause. When the hypophysis enlarges in adolescents, the bones grow excessively and they become giants. If the hypophyseal changes occur after the obliteration of the epiphyses, the characteristic changes of acromegaly (big ends or points) occur. It is remarkable that abnormal development of the hypophysis influences men in the same way as complete castration. It is worth attention on the part of veterinarians to determine if there be any definite changes in the hypophysis of the horse, mare, ram, ewe and sow associated with gelding and spaying.

The effect of removing the ovary and testes from ostriches is a matter of importance to naturalists and physiologists interested in the abnormal manifestations of the sexual characters, primary and secondary. It is well known to gamekeepers that hens which have ceased to lay eggs sometimes assume the plumage more or less completely of the cock. Such cock-feathered hens have an atrophied ovary. One of my most remarkable examples was a hen Japanese pheasant, *P. versicolor*. The metallic coloured plumage being very striking, I secured the body of the bird at its death for the museum of the Royal College of Surgeons, England. In all the specimens I have examined an atrophied ovary has been found. Some observers are not satisfied with this explanation. The experience of South African farmers supports it, for the feathers of caponized ostriches are finer, cleaner and heavier than those ostriches which retain ovary, or testes, as the case may be.

In view of the discovery that the hypophysis and the adrenals (suprarenal capsules) influence the sexual functions and the secondary sexual characters, veterinary surgery, which is making such progressive strides, could add to this knowledge by investigating the gross and microscopic features of the hypophysis and the adrenals in caponized ostriches.

No comparison can be made of the effects produced by the removal of the ovaries in women with those observed in mares. Surgeons have fortunately never contemplated the removal of these organs to control vicious habits, erotomania, bad or incompatible tempers. The only approach to such measures has been bilateral oöphorectomy in epileptics, but this is rarely practised and has never received professional endorsement.

THE VETERINARY PROFESSION IN BELGIUM.

By Dr. DUPUIS.

Director of the State Veterinary School.

The practice of veterinary medicine in Belgium is regulated by the law of April 7, 1890.

All veterinary practice throughout the kingdom is limited to those who have been admitted to the profession in accordance with the stipulation of this law.

The course of studies at the School of Veterinary Medicine lasts seven years, the students being divided into four classes.

Before admission, prospective students must have taken a degree in natural science. This degree is only obtainable after six years' work at the Greco-Latin "humanities," including two years at a university on the science side.

Veterinary surgeons who fulfil all the conditions of the law are placed upon a list, which is published every year. They are all recognized by the Government, and they only can be employed by the authorities, both civil and military. They are also authorized to dispense drugs as required for the treatment of animals which are confided to their care.

Every veterinary surgeon can demand recognition from the Government, but there are also various special categories of veterinary officers as follows :—

(*a*) Veterinary inspectors, numbering eighteen, of whom one is attached to the Agricultural Department and another to the Minister of the Interior ; the others are attached to particular districts, where their activities have full scope.

(*b*) Supplementary veterinary inspectors.

(*c*) Adjutant veterinary inspectors.

(*d*) Supervisors of imported animals and of those which are on the way to the frontier or to authorized ports.

(*e*) Recognized veterinary surgeons.

(*f*) Provincial and communal veterinary officers.

The respective duties and powers of all these officials are determined by royal decrees and consequent ministerial enactments. They have to carry out all the laws and regulations which appertain to sanitary restrictions regarding domestic animals and to hygiene in general.

Out of a population of 7,500,000 inhabitants Belgium can count

more than 750 veterinary surgeons, excluding military veterinarians, who number 60.

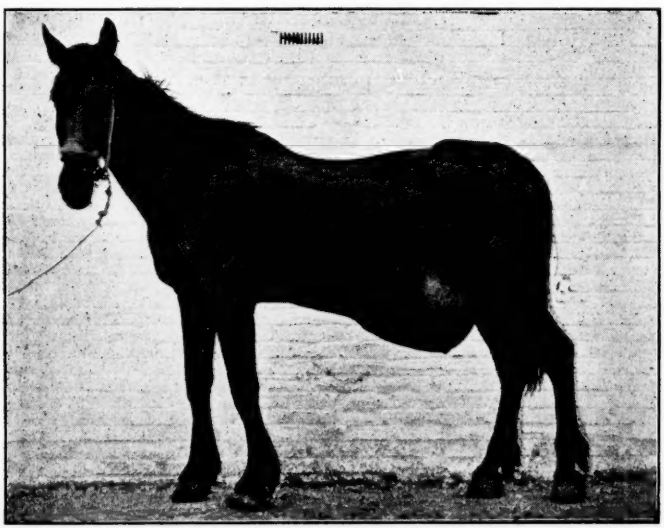
Throughout the various provinces of the kingdom there is a superabundance of practitioners. Even though meat inspection is almost exclusively in their hands the consequences of this professional overcrowding are more and more evident, especially as motoring increases. It is to be hoped that in future there will be other openings for the profession, such as follow on the multiplication of abattoirs and a more thorough inspection of dairies and their produce.

Clinical Articles.

A VERY LARGE VENTRAL HERNIA IN A MARE.

By G. S. THOMAS, M.R.C.V.S.
Chichester.

The subject of the illustration was a bay carriage mare, about 15 or 16 years old, and pregnant when the rupture appeared. Notwithstanding its size she foaled down all right, although she suffered a very great deal of pain during the act of parturition.



A large ventral hernia.

The foal lived for fifteen days and as the mare was useless for work and had a tremendous amount of milk, and the owner did not wish to take any trouble over her, she was destroyed. The edges of the muscle of the abdominal wall appeared on *post-mortem* examination to merge indistinguishably into the skin and it was really astonishing that she had managed to foal down at all. The case was quite inoperable.

ON THE EXPULSION FROM THE HORSE OF A URINARY THROMBUS CLOSELY RESEMBLING A WORM.

By A. W. NOEL PILLERS, F.R.C.V.S., F.Z.S.
Liverpool.

On August 16, 1912, I received from Mr. F. H., F.R.C.V.S., an 8-oz. medicine bottle containing several pieces of slate red material preserved in spirit. In his accompanying letter he said:

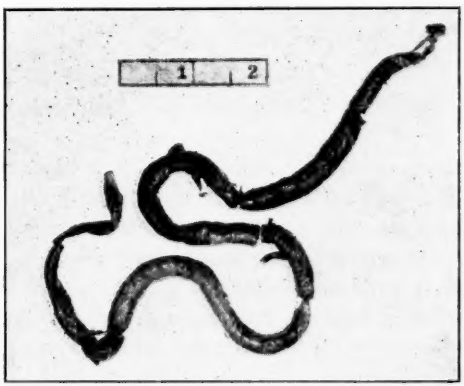


Fig. 1.—The damaged portion of clot with an inch scale. The original measurements have been mentioned in the text.

"I enclose a worm which has been sent to me with the rather curious history that it had come away together with about half a pint of blood from the bladder of a gelding after urination. . . . I should be glad if you would examine it and give me your candid opinion as to what you think of it. Personally it looks to me like the ordinary *Ascaris megalocephala*, but the veterinary surgeon who sent it is so absolutely sure on the point that I do not like to contradict him without being backed up by someone else."

I then wrote the owner of the specimen, Mr. W. J. C., F.R.C.V.S., and in answer to my queries he replied on August 18, 1912: "The history of the case is as follows: An aged vanner was standing in the street in harness when he was noticed bleeding from the penis. In a few seconds the worm escaped from the urethra; it was then alive and brought back to me. The horse was walked to my yard about two miles, and while there passed a large quantity of blood. For twelve hours the urine was blood-stained, but no other symptoms have been noticed. When fresh the worm measured 18 in. in length, and was 1 in. in circumference at the thickest part. . . . Am sorry the specimen was in such a bad state. It is quite six weeks since I sent it to H."

In answer to a further letter, W. J. C. replied on August 24, 1912: "The colour of the worm when voided was red from adhering blood clots, but when washed was yellowish white. The ends were similar to those of the large ascaris. The preservative was for about a week formalin, and it was then put in spirit."

I examined the material, and made sections, which showed that the structure had been derived from blood. On communicating this to W. J. C., I received the following letter, dated October 20, 1912: "Very many thanks for all the trouble you have taken with regard to the 'parasite.' I was of course surprised to hear of your diagnosis, but the examination you made puts it beyond dispute. I only regret the 'worm' did not reach you in better condition. I have shown your letter to two other veterinary surgeons who found it difficult to believe it was other than an ascaris."

As I have recently been asked by F. H. to publish the notes on the case, I submitted my sections and material to Professor E. E. Glynn, and he has very kindly taken the accompanying photographs, and added the following remarks:—

"Several macroscopic sections were cut through the material and these had all the typical appearances of an ordinary red blood clot laminated at the periphery. On microscopic section of the central portion it was seen to consist mainly of red blood corpuscles with a little fibrin and a few blood platelets. Here and there were very small quantities of pigment, evidently hæmosiderin. The periphery consisted almost entirely of blood platelets and fibrin, with some leucocytes and red blood corpuscles. The clot was evidently of recent origin, the central portion being the older. It had increased in size by the deposition of fibrin and blood platelets on the periphery.

Its appearance was quite consistent with that of a blood clot which had been formed in the ureter. There was no trace of parasites or bacteria."

FIG. 2.—Peripheral portion of clot showing masses of blood platelets and fibrin with some leucocytes and red blood corpuscles. × 100.

The clinical record and the microscopic structure of this thrombus appear to me worthy of record, inasmuch as at least four veterinary surgeons mistook it for a worm. One even asserted that it was alive.

AN INTERESTING CESAREAN SECTION IN A MARE.

By M.R.C.V.S.

IN May I was called in to attend a hackney mare, about 11 years old, suffering from tetanus, and found her very severely affected. I injected anti-tetanin without effect; in fact, she steadily became worse, and as she was within a week of parturition, and the foal was of valuable pedigree, I was requested to try to save it at the sacrifice of the dam.

Chloroform was accordingly administered, and the foal was extracted through an incision in the middle of the abdomen, the mare being afterwards chloroformed to death.

The foal was brought up in the usual way with cow's milk and lived for a fortnight, succumbing to an ailment which had nothing whatever to do with the way in which it had been brought into the world.

AN ENORMOUS LIVER IN A HORSE.

By CAPTAIN A. J. WILLIAMS, F.R.C.V.S.
Army Veterinary Corps, Ambala, India.

The photograph is that of an enormous liver discovered on *post-mortem* examination of a country-bred gelding, 7 years old, which was drafted into the Service in March, 1910, but had never done anything

Photograph of the enlarged liver described in the text.

beyond training. The animal never carried condition, and was "pot bellied" and much sunken over the loins. Distinct enlargement of the liver could be felt externally during the later stages.

The horse was treated for anæmia and debility for 263 days out of two years; and eventually, as no improvement ensued, it was destroyed.

The *post-mortem* examination showed a condition simulating generalized tuberculosis affecting the lungs, liver, kidneys, intestines, and the surface of the bladder and pancreas. The liver weighed 90 lb., and was cirrhotic and calcareous throughout. I have once before seen a similar condition in a mule, the liver on *post-mortem* examination having the same appearance and weighing 30 lb. In this case there were no symptoms other than great and chronic debility with pendulous abdomen and sinking over the loins. The mule had the appearance of a mare in foal, the abdomen being so very pendulous.

The liver shown here in the photograph is enormous in size, and on that account is particularly worth placing on record.

SOME CASES OF FRACTURE FOLLOWED BY CURE.

By TATIN.

Losses through fractures in the French Army amount to 75 per cent. Without wishing to criticize this percentage, the author nevertheless thinks that sometimes a hasty decision as to slaughter is given when the subject of the accident might have recovered by reasonable treatment.

Indeed, cure might have perhaps been obtained without treatment and without dressing by setting the damaged animals at liberty, and, above all, without slinging them. If the subject is a mare one ought not to despair, even although a complete cure is not to be expected; more so than ever where by reason of a breeding crisis it is of value to preserve a mare which, although lame, may be used as a brood mare. In support of his argument the author quotes the three following cases:—

(1) A remount mare returning from the place of purchase whilst being embarked at night fell on the edge of the quay and fractured her pelvis; the fracture, complete, and splintered, was situated behind the cotyloid cavity and involved the ischium and

pubis at the level of the obturator foramen. The injured animal, after having covered four kilometres to reach the infirmary of the depôt, was simply put at liberty in a box first of all and then turned out into a paddock. At the end of nine months it was no longer lame and rectal exploration showed consolidation of the fracture; only a complete depression of the croup remained. The mare was delivered up to its regiment two years ago and has not had a day's illness since the accident.

(2) A southern horse, very restive, was taken to the forge the day after purchase and fought so much against the man holding up the near fore-foot that he let go of it and the foot came down violently with the toe on the edge of the pincers. The horse stood on three legs and showed all the signs of fracture of the third phalanx. Poultices were applied for eight days. At the end of this time the injured animal was put in a paddock. Two months after it only showed slight limping when trotted on the pavement. The horse was then discharged to a remount depôt, where it died of glanders four months later. Autopsy showed that there had been complete fracture of the third phalanx and subsequent consolidation.

(3) A Madagascar brood mare put her foot into a hole when galloping on the grass and fractured her pastern. The author did not apply any plastic bandages or silicate. A compression wadding bandage was alone used. The subject was eight months gone in foal and was put at liberty in a box until the birth of the foal. At this time the pastern was anchylosed by an enormous callus and the mare was led about the pasture. Two months afterwards, that is to say, five months after the accident, she followed the other in-foal mares and has continued her career as a reproducer.—*Revue vétérinaire militaire.*

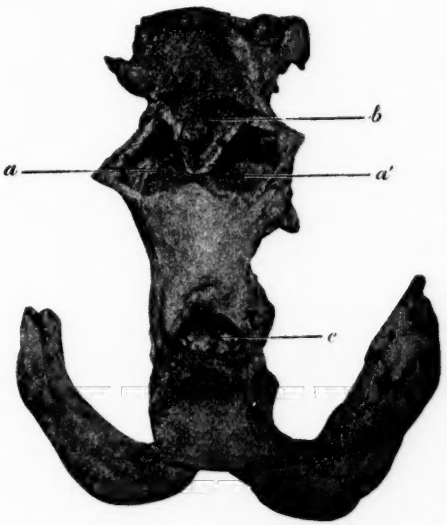
DOUBLE VAGINA AND CERVIX IN THE MARE.

By Professor KELLER.

This is a case of abnormal development of the genitals in a mare which seems worth recording. The abnormality was discovered indirectly by reason of the death of the mare from volvulus.

The entrance to the vagina showed nothing abnormal. At the exit of the ureters the vaginal cavity was divided into two parts by

a folding of the mucous membrane, and each of these so formed recesses possessed a well developed portio vaginalis and a cervical



a, right os uteri ; *a'*, left os uteri ; *b*, division between vaginal cavities ; *c*, simple body of uterus.

canal penetrable by the finger. Both canals led into a common but broadened body of the uretus.

STRICTURE OF THE INTESTINE.

By G. S. THOMAS, M.R.C.V.S.
Chichester.

On the evening of July 10, 1913, I was called by a coal merchant to a six-year-old cart-horse. I happened to know the animal and his history is: A pedigree Shire horse, bred in the district and kept by breeder as a stallion, but getting no stock, was castrated and put to work. He was then sold to the coal merchant when old enough for road work.

On my seeing him on July 10 I found him suffering from abdominal pain of a very intermittent kind, and formed the opinion after watching him for some time that there was some obstruction. Exploration of rectum discovered a stricture about eighteen inches up, and I concluded that, as in former cases,

there was present corresponding stricture in the small intestine. As there is always a possibility of a mistake, although I was convinced as to the condition, I determined once more to try to get evacuation by means of arecoline hydrobromide. This completely failed in its object, but increased pain and salivated the animal. I have now quite discontinued its use as I have never seen good results follow its administration.

With the exception of a small bran mash and a small quantity of clover the animal ate nothing from July 10 to 21. Injections of milk and eggs have continued almost throughout this period, and as recovery seemed out of the question, I advised the owner to have the animal slaughtered. He consented, and I shot the patient on July 21.

Post-mortem revealed an interesting condition, as, with the exception of small pouches about four inches long, the whole of the small intestine had constricted and the pelvic flexure of the colon was attached to the back by a growth as large as a man's head. A portion was sent to the London Veterinary College and reported to be a sarcoma. What strikes me as being remarkable is that after eleven days the horse walked quite strongly and did not roll in his gait.

TWO MORE CASES OF OVARIO-HYSTERECTOMY IN SOWS.

By ASHLEY YOUNG, M.R.C.V.S.

Dunmow.

Since recording, a short time ago, in The Veterinary Journal some observations on ovario-hysterectomy in the sow, I have had two more cases, each of which gave a successful sequel; and as in both instances the uterus was already septic, I think they are worth placing on record. Both were cases of dystocia, and in each case the animal was a young sow.

I operated in the same manner which I have already described in a recent number of the Journal, and before amputating the womb I pushed a pad of cotton wool saturated with tincture of iodine around the site of incision and afterwards over the severed stump. Although the cases did not recover so quickly as those I wrote about before, the sequel was eventually quite satisfactory in each.

Canine Clinical.

OMENTAL HERNIA OF THE LEFT FLANK IN A DOG.

By J. F. D. TUTT, M.R.C.V.S.

Winchester.

It is owing to the comparative rarity of *true* flank hernia in the dog that I think the following note on a case that recently came into the infirmary may be of interest to readers of this Journal.

The subject was an Aberdeen terrier and a swelling that was situated high up in the left flank had been noticed for some time. It had previously been diagnosed by a medical adviser as a serous abscess. On manipulation the swelling was fairly hard and no opening into the abdominal cavity which would have led one to diagnose it as being hernia could be detected. The owner wished the swelling to be got rid of, and with her consent an operation was performed the following day.

The animal having been anæsthetized an incision was made, with the usual antiseptic precautions, directly over the swelling. A quantity (wineglassful) of urinous coloured fluid escaped, and on separating the edges of the wound it was seen that the "swelling" was due to omentum which was adherent to a small opening in the flank wall. The adhesions were carefully broken down and the omentum returned, the opening being sutured. The wound in the skin was sutured in the usual way. The animal made an uneventful recovery and was discharged shortly afterwards.

Dr. Meade Bolton has accepted an offer from the Agricultural Department of Cuba to conduct a campaign against hog cholera, which is causing very great losses in the island. Dr. Bolton sailed from New York for Cuba on August 29, 1914.

Abstracts.

MODERN ASEPSIS AND ANTISEPSIS.

By Professor SCHWENDIMANN.
Berne (Switzerland).

(*Abstract.*)

After commenting on the difficulty of securing asepsis and antisepsis in veterinary patients, Professor Schwendimann writes: In the pre-antiseptic period the rule seems to have been that every wound should be kept as dry as possible. And this rule is a good one to-day because we know that moisture and warmth furnish the best conditions for the growth of bacteria, and that sparse wound secretion checks their development; we also know that the body itself furnishes protective cells which are far superior in their action to our wound remedies, and yet the material which these cells supply often suffers more from the effects of our antiseptic than the pathogenic bacteria themselves. The effect of antiseptics in solution is quite commonly over-valued. It has been proved that the bactericide effect of sublimate solution suffers considerably in the presence of albumen solutions, and these are present in every wound. Finally, after all our trouble in rendering wounds germ-free, contamination occurs a few hours afterwards and pus organisms develop which become deep-seated in the tissue and cells and are no longer accessible.

For this reason we have turned to other handy ways of sterilizing a wound or the field of operation, and painting with tincture of iodine, as recommended by Grossich, has become a recognized procedure. In some cases a benzine swab is used before applying the tincture of iodine. The effect of this procedure is that the alcohol contents of the tincture produces coagulation of the protoplasm of the bacteria and these become fixed and later on killed by the specific effect of the iodine. I have used this iodine painting with good effect in the castration of stallions and cryptorchids and in the operative treatment of hernias and no complications have arisen afterwards. In recent times a new agent has come to hand, the chief effect of which is to fix bacteria. It is called mastisol.

According to Max Meyer (Berlin Dissertation, 1913) mastisol is chiefly a solution of mastix resin in benzol and certain silicates, and the preparation has been patented by the Brothers Schubert, chemical manufacturers in Berlin. Mastix itself is the resin of

Pistacia lentiscus, a Mediterranean sea plant. It is soluble in alcohol, ether, benzol, chloroform, carbon, disulphide and ethereal oils.

Heusner was the first to use this form of resin in surgery. His rather complicated solution was simplified later on by v. Oettingen. According to v. Oettingen, the effect of mastisol is to arrest and kill bacteria, check their development, and prevent clumping.

Collodion, gaudanin, chirol and dermagum are all impermeable, and in transpiration of the body the thin layer is lifted from the underlying parts by collection of moisture and favourable conditions arise for the development of bacteria.

Mastisol, on the contrary, is permeable, on which account the secretions can pass through the layer without influencing the bacteria arrested beneath it and in it. Evaporation goes on freely from the wound and the highly important principle of dryness of the wound is maintained. As the layer of mastisol takes up no water, and this latter is an important point in the development of bacteria, further growth is impossible. By the antiseptic properties inherent in all resins a great part of the bacteria is killed, and as a result of the great adhesive strength of the mastisol the dressing does not undergo the slightest stretching.

Mastisol may be used in wound treatment, sterilization of the field of operation and in bandaging technique. As a support to wounds it has been used in eye injuries, extirpation of capped elbows, and incision of capped hocks. Bursæ, tendon sheaths and joints may now be treated surgically with far greater confidence than formerly.—*Schweizer Archiv für Tierheilkunde.* G. M.

ECZEMA OF THE DOG.

By ESPOUY.

The author holds the view that eczema of the dog in the greater number of cases is a manifestation of a special constitutional condition due to corpulency or an irrational method of feeding, or through want of exercise favouring lymphatic or arthritic diathesis. Just these internal causes make the treatment of eczema so difficult and uncertain. After enumerating and discussing the symptoms and lesions of the disease the author dilates on the drugs used in the external treatment of the disease. These include zinc oxide, bismuth,

resorcin, salicylic acid, silver nitrate, sublimate, creolin tar ointments, &c. Writing in the light of more recent investigations on the pathogeny of eczema of the dog, he ascribes the chief effect of internal treatment as due to the modifying of the general state of health of dogs affected with the disease. Of the drugs used some regulate intestinal activity, and secure antisepsis of the digestive tube. Such are sodium bicarbonate, sublimed sulphur, yeast and ferments (lactobazillin). Others have a complicated effect and are at the same time general tonic and nutritive agents and blood purifiers. Such are arsenical preparations, arsenious acid, Fowler's solution, arrhenal, bourboul water, as well as the recent arsenical compounds, salvarsan, arsenobenzol, &c., which up to now have only been used rarely in eczema of the dog. Other recent drugs have been used, chief among which is colloidal metal, which some authors contend has a bactericide effect as well as a supporting action to the defensive forces of the system. Thus collargol and electrargol have been used. The author has tried both agents and has had most success with electrargol injected intramuscularly in doses of 5 c.cm. to a medium-sized dog. He repeats the injection at varied intervals and has had excellent results in old-standing cases of eczema that have hitherto defied all other methods of treatment.—*Le Progrès agricole.*

Reviews.

Poultry Diseases and their Treatment. By B. F. Kaupp, M.Sc., D.V.S. Edited by D. M. Campbell, D.V.S. Pp. 181, with 56 figs. in the text. 1914. Price 5s. net. London: Baillière, Tindall and Cox.

At last we have a book on poultry ailments written by a veterinary surgeon in the English language with many Americanisms. Several works have appeared in print, produced and edited by laymen, and it has been somewhat of a reproach to the veterinary profession in this country that hitherto none of its members appear to have considered it worth their while to write a book on the common ailments of the useful domestic fowl. The knowledge imparted at the colleges has been chiefly limited to a study of the skeleton of the fowl for the first examination of the course and thereafter to forget all about the bird in the higher flights of equine, bovine and canine medicine.

The subject matter of the work under review is comprehensive and the information given up to date. The book cannot fail to be both useful and instructive to the veterinary surgeon who deigns to look at little things and does not consider a good knowledge of poultry and their diseases as beneath him.

Inasmuch as "prevention is better than cure," the importance of the section on "Sanitation," by Dr. D. M. Campbell, editor of the *American Journal of Veterinary Medicine*, will be duly noted, especially by those who know how often fowls suffer from bad hygiene and overcrowding. The few lines on the disposal of dead and sick birds are quite welcome and opportune.

The diseases proper include the consideration of external and internal parasites, diseases of the digestive tract, the blood, constitutional diseases, diseases of the liver, ovary and oviduct, respiratory passages, legs and feet, brain, tumours, bacteria of the intestinal tract of chickens, and the egg. Then follow chapters on isolation of non-layers, malformations, fractures, wounds and anæsthesia. The white diarrhœa of fowls, black-head, and ringworm of fowls, are well discussed. In connection with the first-named ailment in its coccidian form we always thought that the disease was spread by the organisms multiplying in remnants of food left about in summer time and taken up accidentally by the birds, and the treatment by sulpho-carbolates, estimated to save 80 per cent. of a hatch, would seem to indicate that this view is about correct. The article on black-head is the fullest and best we have yet read. With regard to ringworm we do not think it is right to ascribe the malady in fowls to the *Achorion Schönleinii* and consider it has been determined that the disease is a form of circinate ringworm (due to lophophytum gallinarum) rather than of honeycomb ringworm.

The treatments given in the book should be of great value to poultry keepers and are all simple of performance or easy of application and have proved effectual in many cases.

We wish that some more careful reading and proof-reading had been carried out in connection with the little volume.

On page 15 we notice "beak" spelt "beek" and "gullet" spelt "gullett," and all through the book there are evidences of haste or carelessness in production, *e.g.*, "appearance" spelt "appearanc," "jumping off of" for "jumping off," "occasionally" transformed into "occassionally" and "this condition is race" for "rare." We are inclined to think that "*asthen*" for "*asthenia*" is a pure Americanism, but we do not know.

We welcome the book as filling a marked gap in English veterinary literature and wish it all success. G. M.

Investigation into Scrapie. By J. P. M'Gowan, M.A., M.D., B.Sc., M.R.C.P.E. With an appendix in a case of Johne's disease in the sheep. William Blackwood and Sons, Edinburgh, 1914.

This book comprises twelve chapters of 111 pages on scrapie in sheep. Dr. M'Gowan has been carrying on his researches into this disease for a period of two years. The history of the malady as it occurs in Britain is discussed in the first chapter of the book. In the second chapter the disease as it is said to occur in other countries is summarized, then the symptoms and pathology of the complaint are given, and a case of the affection as seen in Germany has a chapter to itself. The remaining chapters discuss the various stages of sarcosporidiosis, which briefly is the factor which Dr. M'Gowan considers to be the cause of scrapie.

There are twenty-five illustrations as plates, some of them being representations of scrapie sheep and others showing various stages of the sarcocyst.

Dr. M'Gowan's researches seem to have been exhaustive and praiseworthy and his conclusions may be summarized as follows :

(1) The sarcocyst is always present in the skeletal muscles of scrapie sheep in large numbers, and the more advanced the case the larger is the number of the sarcocyst present.

(2) Pruritus (or itching), the chief symptom in scrapie, can be reproduced in rabbits by the injection into them of sarcosporidial emulsions.

(3) Careful clinical examination of typical cases makes it highly probable that the paretic phenomena of the disease are due to a primary muscle lesion.

(4) There is an absence of any condition *post mortem*, except sarcosporidiosis, sufficient to or of a nature likely to cause the phenomena observed in the disease.

(5) No single view can explain so well the symptoms and general features of the disease as this. In dealing with the disease Dr. M'Gowan recommends sending affected animals to the butcher at once and in the early stage of the disease entirely changing the stock by bringing in fresh young ewes and getting rid of the old

ones ; where a complete change of stock is not made, breeding stock should be kept up from the progeny of the older ewes ; a diseased animal should not be used for breeding and inbreeding should be avoided.

Two farms during the investigations furnished cases of Johne's disease in sheep and Dr. M'Gowan considers that many of the so-called " piners " of the Border district are really sheep affected with Johne's disease. Acid-fast bacilli were found microscopically and great thickening of the small intestine macroscopically.

Having written so much with regard to the book and advising all those interested in scrapie and research to get it, we desire to make the following criticism : We do not think that Dr. M'Gowan has proved that scrapie in sheep is an identical disease with " Traberkrankheit " (the trotting disease). Most previous writers, and with good reason we think, have assumed that " trotting disease " and " trembling " correspond to the disease known in this country as " louping ill." From a consideration of clinical symptoms we have believed that " trembling " and " louping ill " were one and the same disease. If " trembling," " trotting disease," and " scrapie " are identical, the puzzle arises—what is " louping ill " ? Surely scrapie, louping ill, trotting disease, and trembling are not common names for one and the same malady.

The moral of the book, if moral there be, is to show plainly the necessity for further research into sheep diseases and the crying need there is for adequate financial support for veterinary research. We seem until recently to have known little about scrapie, our knowledge of braxy may be described as primitive, and louping ill apparently also lies in the region of obscurity.

These are only samples of many animal complaints which scientifically appear to be in the Noah's Ark stage ; this is not a credit to a civilized country that ought to be in the van of progress as regards animal diseases. G. M.

The Milk Question in Edinburgh. By A. Philp Mitchell, Ch.M., M.D., F.R.C.S., formerly M'Cunn Scholar in Surgery and British Medical Research Scholar. Reprinted from the *Edinburgh Medical Journal*, April, 1914.

This is a pamphlet of twelve pages dealing with the milk of Edinburgh. The expenses of the very praiseworthy research of Dr. Mitchell were in part defrayed by the Carnegie Trust. We can only express our admiration for the clear way the investigator puts his facts before his readers and for the eminently common-sense conclusions he comes to. The doctor calls attention to the fact that about 10,000 gallons of country milk come into the city per diem, and yet there is practically no veterinary inspection whatever of country byres. The one veterinary inspector for the city, too, cannot possibly carry out adequate supervision of fully 2,000 cows. The " fresh country milk " is, according to Dr. Mitchell, more of a

myth than the fresh town milk that comes under the purview of the municipal veterinary surgeon.

Samples of milk were collected from the 201 milk shops in the seven wards of the city, and the investigation was chiefly to ascertain the presence of tubercle bacilli. Incidentally it was shown during the examinations that streptococci were very prevalent in ordinary samples of mixed milk, and it should be borne in mind that occasionally these organisms are highly virulent and responsible for cases of acute gastro-enteritis and epidemics of sore throat. The chief point, however, was that in films from only three samples of milk were tubercle bacilli detected, and this, according to the doctor, strongly supports the view that microscopic examination of the sediments from mixed milks is not a reliable method of determining the prevalence of tubercle bacilli. On the other hand, 41 of the 201 samples were found to contain tubercle bacilli when inoculation tests were conducted on guinea-pigs.

The result of the investigations shows that there is a considerable prevalence of udder tuberculosis among cows in country byres whose milk is sent to Edinburgh, for all milk from country byres reaches the consumers through the milk shops, which number fully 400 in Edinburgh. The high incidence of bovine tuberculosis amongst infants and young children residing in Edinburgh and district is thus explainable. As conclusions the doctor points out :—

(1) There is practically no veterinary supervision of two-thirds of the total amount of milk consumed daily in the city.

(2) Steps should be taken to establish a sufficient staff of veterinary inspectors.

(3) Clinical examination alone cannot be relied on for the detection of udder tuberculosis.

(4) Inoculation of the milk into experimental animals is the most certain method for determining the presence of the bacilli.

(5) Legislation as regards the milk supply should include provisions for enforcing the regular bacteriological examination of milk samples.

(6) Any measures to be effective must be so framed that they will be uniformly compulsory throughout the United Kingdom.

G. M.

Clinical Examination of the Blood and its Technique. A Manual for Students and Practitioners. By Professor A. Pappenheim, Berlin. Translated and adapted from the German by R. Donaldson, M.A., M.B., &c., Pathologist Royal Berks Hospital, Reading. Printed and published by John Wright and Sons, Ltd., Bristol. Price 3s. 6d. net.

This is a handy little book of 83 pp., and its contents is divided into three chapters comprising the Blood Film, Hæmocytometry, or the Enumeration of the Blood Corpuscles, and Hæmoglobinometry, or the Estimation of Hæmoglobin. The translator rightly writes that " the clinical examination of the blood

should be carried out as a routine much more frequently than is generally the case in practice" and in this book, of the cardinal lines of blood investigation Professor Pappenheim has only described those methods which have been definitely proved of value. The pathological conditions of the blood discussed relate mostly to human complaints such as anæmia, leukæmia, &c., but the work with regard to the technique of blood examination can be profitably studied by veterinary students and practitioners. The small book first appeared as a chapter in Carl Neuberg's "Handbuch der Ausscheidungen und Körperflüssigkeiten," published by Julius Springer in 1911. The chapter has been published in book form in answer to numerous requests. G. M.

Trade Note.

WYLEYS LIMITED, COVENTRY.

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